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## THE AMBIGUITIES OF LOG DATA: SMART PHONES IN EVERYDAY LIFE

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In this paper we will discuss the analysis of smart phone log data as an expression of everyday life. Smart phones have been celebrated recently as a versatile tool for collecting data about everyday life activities, owing to the integration of the smart phone in these very activities. On the one hand, we use the smart phone for documenting extraordinary and ordinary events of our lives by way of the phone's built-in camera and video functionalities. On the other hand, our activities are recorded in various types of data formats such as communication histories, gps data and timestamps. These data tell a more indirect story about the way we live, how we move about, who are the most important persons in our lives, and so on.

The immense potentials of the smart phone for collecting data about everyday life through 'unobtrusive measures' (Webb, Campbell, Schwartz, & Sechrest, 2000), such as automated behavioral logging, have led to a range of optimistic exclamations about its possible utility in research. For instance, proponents of "computational social science" compare smart phone data as a measure of everyday life with brain scanners' measures of neurophysiological processes (Lazer et al., 2009). Emphasis in this perspective is clearly on the amount and alleged "neutrality" of data allowing us to draw a precise map of everyday life independently of people's own statements.

In this paper, we would like to challenge this view of smart phone log data. That is, we present a methodological discussion that emphasises the ambiguity of smart phone log data as a window for understanding the conductance of everyday life. Everyday life is hereto be understood as an empirical and experiential phenomenon shared by people living it, in line with the social-phenomenological conception of the "lifeworld" (Schutz, 1967). To substantiate the methodological discussion of smart phone log data, we draw examples from an empirical study of smart phone use in everyday life based on the complimentary uses of logdata, screendumps from smart phones and qualitative interviews.

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One main point of the paper is that log data generated through smart phone uses do not provide for neutral representation of this lifeworld. Rather, the log data represent a range of competing perspectives on the lifeworld depending on the way the smart phones are integrated into everyday practices. Specifically, we suggest three perspectives or "dualities" for thinking about the status of smart phone log data: 1. Smart phone data as an expression of everyday life or as an expression of the integration of smart phones into everyday life. 2. Smart phone data as an expression of daily routines of everyday life or as an expression of breaches to this routine. 3. Smart phone data as an expression of the web of communications (or texts) about everyday life or of the contexts in which these communications unfold.

Smart phone data as an expression of everyday life or as an expression of the integration of smart phones into everyday life Smart phones are not just everyday technologies, they are social artifacts endowed with particular social and symbolic values in different social contexts. As argued in domestication theory (Haddon, 2011) the proliferation and use of communication technologies depends on a range of practical and symbolic processes in the individual context that condition its actual use. For this reason use data stemming from these contexts cannot simply be taken as a measure of use at a general level. They are at the same time measures of particular practices and measures of the integration of communication technologies into these particular practices. For instance, certain communicative practices may take place orally or they may take place on different communication platforms depending on the specific context. Smart phone data as an expression of these practices will depend very much on these constellations. One example from our study could be the use of smart phones for coordinating everyday shopping. Obviously, this is an activity occurring in most household and its appearance or non-appearance in data will not tell us whether it takes place or not but rather whether it involves the smart phone or not.

Smart phone data as an expression of daily routines of everyday life or as an expression of breaches of this routine Smart phone data as a measure of everyday life may on the one hand reflect the routines and recurrent patterns of activities involved in everyday life and, on the other hand, it may reflect deviations from these routines and people's attempts at coping with these. For instance, people tend to call or text each other relatively more at the end of the workday in order to coordinate activities such as fetching children, preparing dinner and so on (Helles, 2012). These communicative practices are regular and can be seen as an everyday routine appearing in data as a recurrent pattern of communication. However, a sudden accident, people falling sick or switching jobs may cause a certain outburst of communication aimed at coordinating workarounds to the routine. This communication and its appearance in data is characteristic in its singularity yet it is not less significant for explaining core aspects of everyday life. Not least because any everyday routine comes with a multitude of small and large exceptions that are as important as the rules from which they diverge. In short, using log data alone, we cannot know if the pattern tells us about everyday routines or exceptions from the routines.

Smart phone data as an expression of the web of communications (or texts) about everyday life or of the contexts in which these communications unfold The log data collected through smart phone uses may, at once, be seen as a trace of

communication, that is to say a text made up of all the acts of communicating and acting with and through the device, and a trace of the context of use, signposting through metadata the actual spaces of use, the temporal structures of everyday activities, and so on. However, the log data in itself reveals little about the relative importance of activities in the everyday life, the experienced relationships with others in the flows of communication. Hence to understand the role of various contexts of the everyday and their shaping of communicative practice, the combination of log data with qualitative data provide for a deeper understanding of the integration of smart phones in everyday life.

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